

Pesticides and Respiratory Health

For Agriculture

Nationally, **20,110** cases of acute pesticide poisoning were tracked in 2001. In the agriculture industry, among 3,380,000 workers, there are an estimated **10,000-20,000** doctor-diagnosed pesticide poisonings each year. Being exposed to some pesticides may cause **respiratory symptoms**.¹

How can pesticides enter the body?

- Through the skin
- By eating or drinking
- By inhaling²

What plays a role in how a person responds to pesticides?

- Health condition
- Age
- Personal behaviors (like smoking or hygiene)
- Size of the person (body weight)¹²

What are possible respiratory health effects and what pesticides may increase my risk for that health effect?

This table shows some respiratory health effects and what pesticides may lead to an increased risk of the health effect.

	Wheeze ^{4,5,9} <i>A whistling sound when breathing</i>	Chronic Bronchitis ^{7,8} <i>A swelling of the main airways to the lungs</i>	Farmer's Lung ⁶ <i>Swelling of the lungs from breathing in a foreign substance</i>
Insecticides	Parathion, Malathion ^{4,9} , and Chlorpyrifos ^{4,5,9}	Dichlorvos ⁷	Lindane and Aldicarb ⁶
Herbicides	Atrazine, Alachlor ⁹ , EPTC, and Paraquat ^{4,9}	Paraquat ⁷	
Fumigants		Methyl Bromide ⁷	

Another respiratory health effect from pesticides is asthma^{10,3} (*asthma is a long-term lung disease that causes the airways to swell and narrow*).

Protect your lungs when using pesticides by using the right respiratory protection. Carefully read the label of the pesticide you are using to determine the type of Personal Protective Equipment needed.¹⁵

*This list does not include all possible respiratory health effects from pesticides or all pesticides that may cause respiratory health effects. Read the labels of the pesticides you are using. If you are concerned about a health condition, talk to your doctor.

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What are some other possible health effects from pesticide exposure?

The health effects of pesticides depend on what pesticides are present and the length and frequency of exposure.

Pesticides may irritate skin or eyes, may cause cancer, or may affect the nervous, endocrine or hormone systems.¹¹

Respiratory, allergic, gastrointestinal or neurological symptoms may be associated with being exposed to high levels of pesticides for a short time. Long-term exposure could result in Alzheimer's, Parkinson's, and other neurologic diseases.¹

What can I do to protect my family and myself from pesticide exposure?

Always follow the directions on the label

- Wear personal protective equipment (PPE) as described on the label
 - » Respirator or mask, gloves, shoes, coveralls
- Choose the correct respiratory protection for the job¹⁵
- Be familiar with the PPE you use and make sure it fits correctly¹⁵
- Inspect pesticide application equipment often¹⁴
- Mix pesticides with care¹³
- Regularly clean equipment¹⁵
- Wash clothes you wore during spraying separately from non-spraying clothes¹⁴
- Keep out of pesticide-treated areas for as long as stated on the label¹⁶

Where Can I Find More Information?

- www.epa.gov
- www.cdc.gov/NIOSH/topics/pesticides
- www.aghealth.org
- www.npic.orst.edu
- www.utahpoisoncontrol.org
- www.hicahs.colostate.edu

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